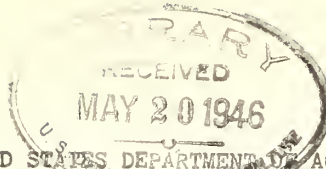


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MILK GOAT QUESTIONS AND ANSWERS

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This series of questions and answers has been prepared to facilitate the answering of inquiries received on the subject of milk goats. The questions are of the types that have been asked most frequently by correspondents. For additional information, including illustrations of milk goats representing different breeds, the reader is referred to the Department publications listed on the last page of this pamphlet.

The Government's herd of grade and purebred Saanen and Toggenburg milk goats mentioned here is maintained by the Bureau of Animal Industry at the Beltsville Research Center, Beltsville, Md.

1. Question. --Where can milk goats be raised? Answer.-- They can be raised in practically all sections of the United States.

2. Q.--What breeds of milk goats are to be found in the United States? A.-- The important breeds are the Saanen, Toggenburg, Nubian, and Alpine. Representatives of these breeds of improved milk goats, although increasing, are not so numerous as the unimproved types. Among the latter are large numbers of the common or American goat found prominently in the South.

3. Q.--Where may high-quality breeding stock be obtained? A.-- The most satisfactory breeding stock will probably be found in the herds of those breeders who have established a system of keeping detailed individual records of their milk goats followed by intelligent selection and mating from the standpoint of milk and butter-fat production.

4. Q.--Where may names of milk goat breeders be obtained? A.-- Names of breeders having stock for sale may be obtained from the Secretary of the American Milk Goat Record Association, Marshall, Ill.

5. Q.--Does the Government maintain a registry for purebred milk goats? A.-- The Government does not maintain a registry for any breeds of milk goats. The business of such registration is a private undertaking. The operation and conduct of

registry associations are the responsibility of the breeder members, such responsibility being delegated by the members to the officers whom they choose to administer the affairs of their organizations.

6. Q.--How much do milk goats cost? A.--Due to the excellent demand for and limited supply of milk goats, breeders ask good prices for stock. Prices of purebred registered milk goats of the leading breeds will usually range from \$25 to \$100 per head, depending on the breed, age, conformation, breeding, and milk production. Purebred bucks and does of proved performance or from record-producing ancestry may range from \$100 to \$300 each. There should be evidence of proved performance if these prices are paid. Grade or crossbred bucks may usually be purchased for from \$10 to \$15; does from \$15 to \$50 and higher if they are exceptional producers.

7. Q.--How may high-quality milk goats be selected? A.--Does and bucks should be of good dairy type and representative of the breed to which they belong. A buck should be masculine in appearance, and of good size for his age. He should have medium-sized bone, neat head and shoulders, deep body, strong, straight legs and good feet, and give evidence of being vigorous and a good feeder. The appearance of either the buck or doe should not be the deciding factor in making a choice. Select a buck from a good-producing doe who is a persistent milker. Nothing is more important in the matter of breeding than evidence that the entire family to which the sire belongs is especially good in performance and conformation. The most reliable method of choosing a herd sire that is likely to produce daughters of high milk and butterfat capacity is to select one that is already the sire of such daughters. A good doe should have a feminine head, thin neck, sharp withers, well-defined spine and hips, thin thighs and rather fine bone. She should have good digestive capacity as shown by the spring of rib and size of stomach, a strong constitution as indicated by the depth and width of chest, and an udder of good size when filled with milk and very much reduced when empty. The so-called wedge shape of the dairy cow is clearly defined in a good milk doe. Although it is not always possible, it is much more satisfactory in making selections to see does during their lactation period. This gives an opportunity to study not only their conformation when they are producing but the udder development as well.

8. Q.--How much milk will a doe produce? A.--This is very important consideration, as the value of a doe depends largely on her milk production. A doe that produces 3 pints a day is considered a fair milker, while a production of 2 quarts is good and 3 quarts excellent, provided the lactation is maintained for from 8 to 10 months. Does frequently yield 10 times their body weight of milk or more annually.

9. Q.--In what months of the year do milk goats normally breed? A.--Milk goats are by nature seasonal breeders. The regular breeding season usually extends from September to March. Attempts to breed does from January to March are less successful than in the fore part of the breeding season due to irregular heat periods of less intensity. During the late spring and summer months only an occasional doe can be bred. The Nubian breed is reported to possess a tendency to breed out of season more frequently than the other breeds.

10. Q.--How may the seasonal breeding problem be overcome? A.--There is no practical method known at present by which does can be made to mate successfully outside of their regular breeding season. However, in a herd of several does this problem may be overcome somewhat by staggering the breeding dates over as long a period as possible. By this is meant dividing the herd, for example, into thirds and breeding one group of does early, one in the middle, and another late in the breeding season. This practice will extend the freshening dates over a wider period and thus make it possible to have a more continuous milk supply during the year. This is especially important to the goat dairymen who must have milk regularly for his customers.

11. Q.--At what age do the does first breed? A.--Does that are normal in their sexual development may show signs of breeding as young as four months of age. However, it is not generally considered a good husbandry practice to breed them until they are 15 to 18 months of age, at which time they will be practically grown if they have been well cared for.

12. Q.--How many kids will a doe produce at one time? A.--The usual number of kids at one time for mature does is two, but frequently there are three, and it is not a rare occurrence, especially among the common American goats, for a doe to produce four. In a herd of 30 does or more the kidding may be expected to approximate 200 percent, which would be 60 kids.

13. Q.--What is the average span of life of milk goats? A.--Under good conditions of livestock management milk goats have lived to the age of 12 years and older, but on the average it is safest not to expect the average milking doe to be economically productive beyond 7 or 8 years of age. According to records obtained in the Bureau's herd does reach their period of maximum milk production between 4 and 6 years of age. If bucks are properly handled, and kept in a healthy condition and separate from the does, it is not unusual to have them serviceable for breeding to the age of 8 years or more.

14. Q.--Are milk goats as subject to disease as other animals? A.--Although considered very healthy, goats are about as subject to disease and various ailments as other animals. Goats are rarely affected with tuberculosis but the disease known as brucellosis (corresponding to undulant fever and Malta fever in man) has been found in goats in the Southwest. Some of the common ailments of the goat are abortion, constipation, mastitis, pneumonia, foot rot, and internal and external parasites.

15. Q.--What is the most economical way to begin a herd? A.--Owing to the scarcity of high-quality does, both grades and purebred, and the high prices asked for them, it is most economical to begin a herd by selecting good common does, such as are found in many sections of the country, and breeding them to well-bred bucks of the leading breeds. The possibilities of a system of grading-up have been demonstrated at Beltsville, Md. Using a foundation of common or American does and bucks, the Bureau's herd was established in 1909. Continued use of high-class purebred Saanen and Toggenburg bucks in this herd since 1911 has more than tripled the average

annual milk yield of the grade does and more than doubled the average length of lactation, according to a comparison of milk production records during the 5-year period 1936-1940 with those of the foundation does. Some of the grade does of the fourth and fifth top-crosses with purebred bucks have nearly equalled the milk production of the purebred does of the same breed. These results indicate that, although several generations of top-crossing are required, superior strains of milk goats can be developed for milk production by this method.

16. Q.--Are special buildings and equipment necessary for raising milk goats?

A.--If only a few goats are kept it is not necessary to have much equipment nor expensive buildings. It is essential that the quarters used be clean, dry, and free from drafts. If it is planned to operate a goat dairy or sell milk for human consumption, it would be advisable to consult the local health department for its regulations and requirements concerning dairy barn construction.

17. Q.--How many goats can be raised per acre of land?

A.--The number of goats which can be kept will depend to a considerable extent upon the system of management. There are two principal systems of raising goats, one in which the goats are stall-fed the entire year and the other a combination of stall-feeding in winter and pasturing in summer. Both systems are used with apparent success. It is estimated that one acre of good pasture is sufficient for 2 to 3 mature goats during a grazing season five to six months in length. If it is intended to grow the grain and hay for the goats, additional acreage must be provided for this purpose. Under the stall-feeding system the feeds are usually purchased from outside sources, and the number of goats which can be kept will depend upon the size of the buildings and adjoining lots available for housing the goats.

18. Q.--How much feed do milk goats require?

A.--It is ordinarily considered that from 6 to 8 goats can be kept upon the feed required for one cow. Approximately 500 pounds of hay and 450 pounds of grain a year are required for each mature goat. These amounts are needed in addition to pasture. If no pasture is available about 75 percent more hay and 20 percent more grain would be required. Goats can be fed the ordinary grains and roughages generally grown on farms. Most of the feeds that are valuable for the production of milk with dairy cows are also suitable for does. Goats are browsers by nature and they prefer leaves, twigs, and weeds to grass. However, the feeding of some grain or hay as supplements to browse is usually essential for maximum milk yield.

19. Q.--What is the cost of maintaining a herd of milk goats?

A.--Estimated annual feed costs for does in the Bureau's herd and the reports from privately owned herds have shown a range of from \$15 to \$28 per doe. It is estimated that in general total costs of goat milk production may be divided into the following proportions: labor 50 percent, feed 25 percent, and overhead 25 percent.

20. Q.--Is experience necessary to successful milk goat production?

A.--Persons wholly inexperienced in the raising of milk goats may hope to be successful only by starting in a small way with a few animals and growing into the business as they gain in experience. A visit to the farms of goat breeders or dairies would undoubtedly be helpful in acquainting prospective goat raisers with some of the practical aspects of this enterprise.

21. Q.--What are the principal sources of income to be derived from milk goat production? A.--The income of milk goat producers is derived principally from two sources--the sale of breeding stock and the sale of milk and milk products. Goat's milk has only a specialized demand and the development of goat dairy enterprises has been limited largely by the market created by the producer's own initiative. The producer of good breeding stock, on the contrary, has been in a more favorable position, for generally a greater demand exists for good stock than can be supplied. The production and sale of purebred stock constitute a business for the few, as these operations demand the initial possession of superior foundation stock and a knowledge of breeding methods for the improvement of the stock. They also require capital and excellent knowledge of goats and goat pedigrees.

22. Q.--Is there a market for goat's milk? A.--There is no established market for goat's milk in the same sense that there is for cow's milk. For this reason it is necessary for the producer to develop his own market for this product through advertising and personal contact with institutions, such as hospitals and sanitariums, and individuals in a position to use the milk.

23. Q.--What price can be obtained for goat's milk? A.--The price that can be obtained for goat's milk depends on several conditions. If the milk is sold for ordinary uses, the price, of course, will be much lower than if a special market has been developed. In the past the price has ranged from 10 to 50 cents a quart and sometimes even higher. The highest prices have been obtained when the milk has been supplied for the use of infants and invalids. The demand and the cost of production will serve as a guide as to what price should be obtained.

24. Q.--Are there State laws regulating the production and sale of goat's milk? A.--Only a very few States are reported to have State-wide laws regulating the production and distribution of this product. However, some counties, cities, and towns have ordinances regulating the distribution of goat's milk within their boundaries while still others require goat's milk producers to follow the same regulations as the producers of cow's milk. Local health departments are usually in position to give information concerning any such regulations.

25. Q.--How does goat's milk compare with cow's milk as a food? A.--Milk from the Bureau's goat herd has been found to be a healthful, nutritious food, not unlike the milk from Holstein cows in general composition and nutritive value. The smaller fat globules and the softer curd of goat's milk contribute to its ease of digestibility. The milk of the Saanen and Toggenburg breeds usually contains from 3.0 to 3.5 percent butterfat. The Nubian breed is reported to produce milk containing 4 to 6 percent butterfat.

26. Q.--What are the principal uses of goat's milk? A.--For general use such as drinking or cooking, goat's milk has proved to be highly satisfactory. Some persons who are allergic to cow's milk can consume goat's milk readily, due largely perhaps to its easier digestibility. Although it makes good butter, it is less suitable than cow's milk for this purpose and ordinarily very little is produced. Several varieties of cheese are made from goat's milk, especially in Europe. To a limited extent, goat's milk in powdered, condensed, and evaporated form is manufactured in the United States.

27. Q.--What disposition can be made of the goat kids? A.--Persons who do not care to raise the kids usually can dispose of them when a few days or weeks old, at prices ranging from a few dollars up to \$10 a head. In addition to their potential use for breeding and milk production, they may be sold as pets, for meat, or to persons desiring to raise them for clearing areas covered with underbrush or weeds.

28. Q.--Are milk goats satisfactory for meat? A.--Since these animals have been bred and developed primarily for milk they consequently do not excel in meat production. However, in some sections a great many goats of the milk type, especially kids, are consumed annually. In some parts of the South kids are considered as a delicacy and are in demand. They are sold for slaughter when from 8 to 12 weeks of age. The flesh of young goats or kids is palatable and has a flavor suggesting lamb. Mature goats do not fatten and carry flesh like sheep. Nevertheless, it is known that a great many goats, both old and young, are slaughtered annually and their meat sold as mutton and lamb.

29. Q.--Is there a demand for goatskins? A.--The United States imports in normal times upward of 60,000,000 pounds of goatskins annually. The number of domestically produced goatskins is not definitely known, although estimates have indicated a production of 400,000 or more each year. Skins from the short-haired goats, such as the common type of American goats of the milk breeds, are the kind used in the manufacture of shoes, gloves, book bindings, pocketbooks, and like articles. As a rule, goatskins from the short-haired goats are worth from 25 to 50 cents each, the price depending on the size and condition of the skin.

30. Q.--Do milk goats occupy an important place in our domestic economy? A.--Because a good milk goat will supply sufficient milk for the average family for at least 8 to 10 months of the year and can be kept on a smaller area than a cow, they occupy a place in American agriculture not filled by any other class of livestock. While it is not to be expected that the goat will supplant the dairy cow to any great extent, there are sections of the country where good milk goats would contribute materially to the welfare of many families. Goats seem especially suitable for families of low incomes living on small acreages in suburban or mining districts, and in other areas where a good supply of milk is not available and the keeping of cows is impracticable.

31. Q.--How may milk goat breeders aid in future milk goat improvement? A.--The investigations at Beltsville indicate great potentialities for milk goat improvement by improved breeding methods. Such improvements must come largely through the efforts of milk goat breeders. Practices that should be of general benefit to breeders include: The keeping of more complete records of milk and butterfat production, fertility, and fecundity; development of a more extensive record-of-performance program that will identify the better breeding stock; and more extensive use of proved sires.

32. Q.--What is the Government doing to help the milk goat industry? A.--The Bureau of Animal Industry maintains a herd of purebred and grade Saanen and Toggenburg milk goats at Beltsville, Md., for research purposes. Experimental studies conducted

with this herd are designed to obtain factual information concerning the breeding, feeding, and management of these animals as well as on the composition and properties of their milk.

The Bureau's assistance to the milk goat industry consists in furnishing the public with all bulletins and scientific information available for distribution, and in answering questions which are submitted to it. If at any time breeders desire personal assistance at their farms, they should contact their county agent or the Animal Husbandry Department of their State Agricultural College.

Publications on the subject of milk goats and goat's milk issued by the Department:

Farmers' Bulletin No. 920, "Milk Goats"

Technical Bulletin No. 671, "Composition and Properties of Goat's Milk,
as Compared with Cow's Milk"

Yearbook Separate No. 1600, "Breeding Goats"

Yearbook Separate No. 1712, "Feeding Problems with Goats"

A.N.D. No. 6. "Diets and Feeding Schedules for Milk Goats"

